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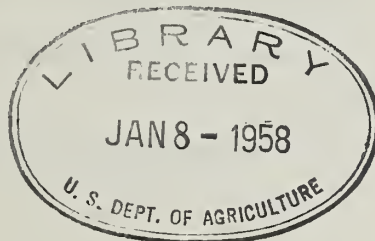
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BACKGROUND, PHILOSOPHY AND PURPOSE OF PROJECT OUTLINE //

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EXCERPTS FROM THE FIRST REPORT OF COMMITTEE ON
EXPERIMENT STATION ORGANIZATION AND POLICY - 1906

Proceedings of the 20th Annual Convention of the Association of American Agricultural Colleges and Experiment Stations, November, 1906

When the standing committee on station organization and policy was appointed at the Washington meeting a year ago there seemed little work for the committee to do, and it was decided best not to force work, but allow matters to develop and take up such questions as might from time to time arise.

I. The Adams Act

In March, when the passage of the Adams bill seemed to be assured, Director True, of the Office of Experiment Stations, wrote the chairman of the committee that a number of questions as to the policy of stations in the expenditure and use of this new fund would be much discussed in the near future, and on some of these matters the Office of Experiment Stations would have to take action as representing the Secretary of Agriculture in the administration of the Adams Act. He suggested, therefore, that the committee be called together to take such action as might seem desirable. Accordingly, a meeting of the committee was held at Chicago April 7. Directors Davenport, Scovell, Thorne, and Woods, of the committee; Doctor Babcock (representing Director Henry), and Director True and Assistant Director Allen, of the Office of Experiment Stations, were present, the last three on invitation of the committee.

The committee found itself in accord with the Office of Experiment Stations in regard to the general scope of investigations that can properly be undertaken under the Adams Act. There has been during the year the most cordial relation and a very complete understanding between the committee and the Office of Experiment Stations in regard to the policy to be pursued, and the committee heartily indorses the letters and circulars of the Office relative to the Adams Act.

Among the problems under consideration by the committee are ---

- (1) How can unnecessary duplication of work be avoided?
- (2) How can continuity of effort be better insured, and rapid changes in station officers be avoided?
- (3) What are suitable lines of investigations to be taken up under the Adams Act?

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The greatest difficulty at the present time, as disclosed by conversation and correspondence with experiment station men, are (1) a lack of clear discrimination between investigation in a strict sense and ordinary experimental work; (2) a lack of definiteness in the purpose and plan of the investigations; (3) a tendency to take up too large or broad problems; and (4) the outlining of too large a number of projects.

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Instances might be multiplied and extended to all branches of agriculture which show a great difference of opinion as to what constitutes research, and mark every gradation from isolated experiments of purely practical import to investigations of the most abstract character. They indicate that the subject needs careful and detailed study and cannot be disposed of offhand. One difficulty lies in the complex character of our agricultural problems. They have not been subdivided and classified as in the case of the pure sciences, and in many cases our work is inconclusive and does not bring our knowledge up to a definite point or stage. In a sense it has been unsystematic, leaving our knowledge so fragmentary that there is often difficulty in determining whether a given topic is an original one or not.

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At the present time we must confine ourselves to general principles in selecting the line of research to be taken up under the Adams Act.

To be sure that these lines are in the scope of the Adams Act, it will be necessary for the station administration to clearly understand what constitutes research.

Only a few lines can be advantageously undertaken at a time. What these lines of investigation shall be must be determined chiefly by the equipment of the station in men and facilities.

The man is the most important factor. If the station already has the man, the line of investigation must be one to which he is adapted by mental aptitude, education and training.

POLICY OF THE OFFICE OF EXPERIMENT STATIONS - 1906

"Work and Expenditures of the Agricultural Experiment Stations."
A. C. True and E. W. Allen. U.S.D.A., Annual Report of the Office of
Experiment Stations, 1906

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The device of advance approval of contemplated state action is a method of primary importance. By the review of plans and budgets outlining proposed programs of action, the federal agency may assure itself that the contemplated work is in accordance with the policies of the federal act. This is the primary utility of the method, but it has collateral values. It may compel a planning attitude and a periodic reexamination of state programs. It permits federal technical advice and assistance to be offered at a time when it may exert the greatest influence. Wide ranges of performance can, of course, come within the confines of the acts of Congress, and the periodic review of programs of work permits a more or less unremitting federal pressure for improvement.

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In passing upon these projects the Office has undertaken to determine only their suitability and appropriateness under the terms of the act. It has left to the individual initiative of the station workers the planning of the investigations and the selection of the topics most important to their localities. The Office has insisted only that the projects as outlined should be such as to characterize them as scientific investigations, embracing some original features. It has not presumed to pass, except in an advisory way, upon the feasibility of the investigations, the method of procedure, or the probability of the work leading to conclusive results. While it has made many suggestions for the strengthening of the investigations, these suggestions have necessarily been advisory, rather than mandatory, since the responsibility for the planning and execution of the investigation must rest with the station worker. Every effort has been made to lead by suggestion, to inspire the spirit of investigation, and to preserve the individuality of the investigator. . . .

Research is worthy of the name only as it is directed to the answering of definite problems by scientific methods of procedure. This will involve a definite plan of operations and thorough consideration of what is known of the subject and its bearing, and should lead to a knowledge of the reasons for the results secured.

Again, research presupposes a definite aim and a definite problem to be solved, a specific end to be attained rather than the mere accumulation of data. In the matter of projects the Office has insisted that this definite aim should be apparent, and that the work should be directed toward some problem or phase of a problem which would result in a contribution to our knowledge, making it less empirical and more definite. It has declined to approve plans for conducting surveys, the making of collections of and for themselves, the making of compilations and of monographs, studies of broad questions rather than specific problems or phases, the making of analyses or experiments merely to add to the general fund of data, the accumulation of observations not correlated with a definite line of investigation, the mere attempt to secure agricultural products of a superior quality without a recognition of the scientific principles involved and an attempt to add to our knowledge of them, or the conduct of experiments which add merely to our empirical knowledge but do not aim to throw light upon the fundamental principles. In a word, the effort has been made to set up the same standards for investigation and research in agriculture that are generally recognized in older branches of science.

PURPOSE OF JOINT STANDING COMMITTEE ON
PROJECTS AND CORRELATION OF RESEARCH

Proceedings of 30th Annual Convention of the Association of American
Agricultural Colleges and Experiment Stations, December, 1916

Appointed at the 27th Annual Convention of the
Association of American Agricultural Colleges and Experiment Stations
November, 1913, Combined with ESCOP, November 1943

Report of Joint Standing Committee on
Projects and Correlation of Research

The joint standing committee on projects and correlation of research was appointed for the purpose of studying the research projects now active in the Federal Department of Agriculture and in the State Experiment Stations. It seeks:

1. To determine if there now exists any wasteful, unnecessary or perhaps harmful duplication of effort within these agencies.
2. To recommend general principles which may be applied at this time, to the end that public funds may be more efficiently and economically utilized.
3. To suggest definite opportunities for the correlation of investigative projects, planned with a view of solving the same or similar problems.
4. To determine the facts, to interpret the results, and to make recommendations, in order that greater efficiency may be obtained; in some cases by hastening the completion of important work and in others by securing the advantages which may be derived by a combined attack on the same problem at the same time at several locations.

A RECOMMENDATION BY THE COMMITTEE ON

EXPERIMENT STATION ORGANIZATION AND POLICY, ON OUTLINING PROJECTS

Proceedings of the 41st Annual Convention of the Association of Land-Grant Colleges and Universities, November 1927

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More Critical Scrutiny Still Needed in Outlining New Research Projects

The importance of improving or maintaining standards of experimental station research and to this end the need for careful study of project plans for new projects were discussed by the Committee on Experimental Station Organization and Policy in 1925 and again in 1926. Yet, so far as your committee is able to judge from individual experience and information available as to general practice, there is still opportunity for improvement, and there is still need for more careful scrutiny on the part of project leaders and administrative officers in outlining new research projects so as to insure "concrete investigations of such limited range as to make them feasible of accomplishment" within reasonable time.

The authorization of new projects is an important administrative matter, and merits the most careful consideration and cooperation of the research leader and his co-workers with the responsible administrative officers in narrowing the proposed investigation to a concrete phase of a problem looking to conclusions with minimum qualifications.

Practices and policies followed at different experiment stations in initiating a new piece of research or in drawing up and adopting a research project differ widely. The plan followed depends in part at least upon the size of the station staff and upon the way in which the different directors are accustomed to handle administrative business. The methods in vogue may be roughly classified as follows:

- (1) The director takes full responsibility in passing upon projects.
- (2) The director appoints a standing committee to act in an advisory capacity and to make a careful study of all projects submitted.
- (3) The director calls into conference members of the station staff who are in a position to contribute to the study or the drafting of the project.

Whatever the method of procedure the leader of the proposed project should assume responsibility for knowledge and analysis of previous investigation, or investigations under way, which may have a bearing on the research proposed by him. In like manner, he should be prepared to support his proposed methods of investigation as adequate for accomplishment in the research proposed, and feasible of being carried out with the facilities and equipment which may be made available.

After thorough consideration of these matters, the next important task is to formulate a project statement which pictures for administrative officers, other investigators, and co-workers the merits of the project, its objective, procedure in the proposed investigation as to technique and methods, the probable period of time and its reasonableness, and the funds required and their adequacy for the proposed work.

Your committee recommends as a policy to research workers and responsible administrative officers more careful scrutiny of new projects, keeping in mind:

The Title. This should characterize the concrete, limited unit of work to be undertaken and not cover the entire field to which the project is related.

The Objective. It should be clear cut and specific, and not involved with statements of procedure.

The Outlook. The project should be constructive in character. It should take account of the status of the question, attack points which need further study, supplement other work, exhibit vision and ingenuity, and give prospect of success.

What, specifically, is it proposed to add to the sum of knowledge of the subject? Such a contribution may deal with some new point, or those still in doubt, or determine applications to the conditions in the region.

The Procedure. It should be up-to-date, representing the progress and current views on methods and technique. It should give data that will stand statistical analysis and be comparable with other similar accepted data. Does it cover the requirements of the subject, or is it one sided or inadequate in some respects?

Thoroughness. The project should be designed to undertake thoroughly and with reasonable completeness the investigation of the subject and should not be fragmentary and superficial.

Probable Duration. Is the time element a reasonable one? Does the project commit the station to a course it may not be desirable to carry through?

The Funds Required. Is the estimate ample for the proposed investigation? Are the expenses and other essentials within the means of the station budget?

NEED OF AN OUTLINE EXPRESSED

Report of Joint Committee on Projects and Correlation of Research

Proceedings of the Association of Land-Grant Colleges and Universities
53rd Annual Convention, November 1937

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5. The successful effort of the Committee on Experiment Station Organization and Policy with the cooperation of the Office of Experiment Stations to encourage at the outset of an investigation preparation of a detailed outline of the proposed project, discussing its relationship to projects in progress elsewhere and to work already published, constitutes a fundamentally important step toward the establishment of a logical correlation of any proposed study with work already under way. It is the recommendation of this Committee that the Committee on Experiment Station Organization and Policy continue to encourage effective outlining of projects with the assistance of the Office of Experiment Stations.

6. The cooperation of the federal Office of Experiment Stations with the Agricultural Experiment Stations in the endeavor to prevent duplication of effort and to keep each project in each state clearly defined in field of work and methods of study, tends strongly to bring about a condition of well-correlated effort among workers and to contribute directly to their success.

Signed

V. R. Gardner
Fred Griffe
O. E. Reed
A. G. Black
J. T. Jardine
S. B. Doten, Chairman

PRELIMINARY DRAFT OF

"ESSENTIALS OF AN EXPERIMENT STATION PROJECT OUTLINE"

SUBMITTED TO ALL STATION DIRECTORS FOR COMMENTS AND SUGGESTIONS

December 5, 1940

Director W. R. Horlacher,
Agricultural Experiment Station,
Fayetteville, Arkansas.

Dear Director Horlacher:

The essentials of an experiment station research project outline, as recently adopted tentatively by the Committee on Experiment Station Organization and Policy of the Association of Land-Grant Colleges and Universities, are set forth in the enclosed mimeographed sheet entitled, Essentials of an Experiment Station Project Outline. This sheet is a revision of a document previously approved by the Committee. It was deemed desirable that this document be further revised in view of the growing need for the maintenance of more complete, tangible, and better classified records for experiment station research projects.

While at the recent Association meetings in Chicago, the Committee recognized that it would not be feasible to attempt to assemble and fully consider all of the ideas and suggestions of the various directors as to the adequacy of this document by presenting it orally before one of the sessions of the Experiment Station Sub-section. In order to get full consideration of the directors, the Committee, therefore, requested the Office of Experiment Stations to mimeograph this document of essentials as adopted tentatively by the Committee and send it to the directors, requesting their consideration and criticism.

This copy is, therefore, enclosed with the request that all criticisms and suggestions be sent to Director R. E. Buchanan, Agricultural Experiment Station, Ames, Iowa, Chairman of the Committee on Experiment Station Organization and Policy, for consideration by that Committee in connection with final action on this document.

Very truly yours,

James T. Jardine

Director of Research
and
Chief, Office of Experiment Stations

MASTER PROJECTS AND SPECIFIC LINES OF RESEARCH

GENERAL POSITION OF SESD

Excerpt of letter to Dr. R. W. Cummings, then Associate Director of North Carolina Experiment Stations by E. C. Elting, SESD. July 19, 1950

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"From the stations' standpoint, in order to develop a well-coordinated research program in certain fields, a master plan is often useful. Under such a master plan would be developed substantial lines of research, all within the scope of the over-all program, yet each outlined as a distinct study with corresponding allocation of funds and personnel. Such definite research units being conducted currently are the entities with which the administrator must deal, rather than the master plan.

"Where a long-term master outline seems desirable, it need not be submitted to this office for approval, although a copy for our files would be appreciated. Outlines for the individual projects as they are inaugurated under such a master plan, however, would require separate approval to receive Federal-grant fund support as is true with other projects. Likewise, both the financial and technical reports would be based on these units. Their connection with the master plan could be indicated, if desirable, through the number or title selected, or both.

"The individual project under a master plan, as in the case of ordinary projects, may, in turn, include a number of distinct phases or units of investigation conducted in such a manner that separate assignment of funds or personal or separate reports of progress might be extremely difficult, if not impossible. It would manifestly be unwise in such cases to attempt their separation, except in so far as to set forth clearly in the project outline the objectives and procedures relating to each phase. In order, however, that a project outline may be kept up-to-date on current work, revisions or amendments should be provided whenever necessary to indicate completed phases or significant new features or major modifications in procedures, as, for example, the inclusion of radioactive phosphorus in a fertilizer study."

ESSENTIALS OF AN EXPERIMENT STATION PROJECT OUTLINE

Title. A brief, clear, specific designation of the subject of the research. The title, used by itself, should give a good indication of what the project is about.

Justification. Should present (1) the importance of the problem to the agricultural and rural life of the State or region; (2) reasons for doing the work such as the needs the project will fill and the importance of doing the work now; and (3) ways in which public welfare or scientific knowledge will be advanced.

Previous Work and Present Outlook. A brief summary covering pertinent previous research on the problem (citing the more important and recent publications from other stations, as well as your own station); the status of current research; and the additional information needed, to which the project is expected to contribute. (Literature citations may be listed at the end of the project outline.)

Objectives. A clear, complete, and logically arranged statement of the specific objectives of the project.

Procedure. A statement of the essential working plans and methods to be used in attaining each of the stated objectives. The procedures should correspond to the objectives and follow the same order. Phases of the work to be undertaken currently should be designated. The location of the work and the facilities and equipment needed and available should be indicated. Wherever appropriate, the procedure should provide data suitable for statistical analysis. The statement on procedure should indicate that the research has been carefully planned and should provide for changes when they are necessary to improve the work.

Probable Duration. An estimate of the maximum time likely to be required to complete the research originally planned and publish the results. Whenever any material change in the objectives of a project is advisable, a new or revised project outline should be prepared. A major change in procedure might also necessitate a revision of the project outline.

Financial Support. Estimated annual allotments (by funds) to (1) salaries, (2) maintenance, based on analysis of requirements for labor, equipment, supplies, travel, and other operating expenses.

Personnel. The leader or leaders and other technical workers assigned.

Institutional Units Involved. Each subject matter unit in the agricultural experiment station and any other units of the institution contributing essential services or facilities. The responsibilities of each should be indicated. If there is an advisory, coordinating, or directing committee for the project, this should be shown.

Cooperation. A statement as to cooperation with the U. S. Department of Agriculture or any other stations, institutions, or other agencies cooperating formally or informally on the project. List Regional project if project is Contributing.

